

REMARKS

Favorable reconsideration of this application in light of the following discussion, is respectfully requested.

Claims 1-20 are presently active in this case. The present Amendment amends Claims 1, 7, and 15. Support for amended Claims 1, 7, and 15 can be found in the original specification, drawings, and claims as originally filed.¹ No new matter is presented.

The outstanding Office Action rejected Claims 1-20 under 35 U.S.C. § 101. Claims 1-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1, 2, 7, 8, 15 and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bruckman (U.S. Publication No. 2003/0048754) in view of Sugano (EP 0579472). Claims 3-6, 9-14, and 17-20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bruckman and Sugano in view of Honcik (U.S. Patent No. 5,761,625).

Applicants acknowledge with appreciation the courtesy of Examiner Hossain in granting an interview in this case with Applicants' representatives on May 2, 2007, during which time the issues in the outstanding Office Action were discussed as substantially summarized hereinafter and also on the Interview Summary Sheet.

In response to the rejection under 35 U.S.C. § 101, Applicants have amended independent Claims 1, 7, and 15 to recite "wherein, if the relation is not satisfied, a user is notified that said packet switching network is not deterministic." Thus, Applicants respectfully submit that amended independent Claims 1, 7, and 15 recite useful, concrete, and tangible results in accordance with 35 U.S.C. § 101. Accordingly, Applicants respectfully request the rejection under 35 U.S.C. § 101 be withdrawn.

In response to the rejection of Claims 1-20 under 35 U.S.C. § 112, second paragraph, Applicants have amended these claims in accordance with the suggestions set forth in the

¹ See the specification at paragraphs [0012], [0044], [0056], [0075], and [0084]; and original Claims 1, 7 and 15.

outstanding Office Action. Accordingly, Applicants respectfully request the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

The response to the rejection of Claims 1, 2, 7, 8, 15 and 16 under 35 U.S.C. § 103(a) as unpatentable over Bruckman in view of Sugano, Applicants respectfully submit that amended independent Claims 1, 7, and 15 recite novel features clearly not taught or rendered obvious by the applied references.

Claim 1 is directed to:

A process for communication between subscriber stations via a packet switching network, said process comprising

evaluating deterministic behavior of the packet switching network, the behavior being defined as deterministic if any packet sent on the network from a source subscriber station reaches a destination subscriber station within a duration that is limited in time, said evaluating comprising:

determining a latency value, the latency value being a residence time in an output buffer of a switch,

determining a max latency value, the max latency value being a maximum residence time in an output buffer of a switch,

determining a BAG_i value, the BAG_i value being a minimum time between two consecutive frames belonging to a virtual link i, before they are transmitted,

determining a (Jitter In)_i value, wherein the (Jitter In)_i is jitter associated with a virtual link i that represents a time interval between a theoretical instant at which a frame is transmitted, and its effective transmission that may be before or after the theoretical instant,

determining a (max frame duration)_i value, the (max frame duration)_i value being a duration of a longest frame on the virtual link i, and

determining for each output port from each switch on the network if the following relation is satisfied:

$$\sum_{\substack{i = \text{number of virtual links} \\ \text{passing through the buffer}}} \left[1 + \text{int}\left(\frac{(\text{Jitter In})_i i + \text{maxLatency}}{\text{BAG}_i} \right) \right] * (\text{max frame duration})_i \leq \text{latency},$$

wherein, if the relation is not satisfied, a user is notified that said packet switching network is not deterministic.

Independent Claims 7 and 15 recite features substantially similar to independent Claim 1.

Thus, the arguments presented below with respect to independent Claim 1 are applicable to independent Claims 7 and 15.

Turning now to the applied references, Bruckman describes a method for measuring latency in a bidirectional ring network including transmitting a latency measurement packet from an originating node to a peer node and noting the time of receipt of the packet at the peer node. The packet is then transmitted back to the originating node in the opposite direction, while recording in the packet an indication of a peer node difference between the time of transmission of the packet to the peer node to the originating node and the time of receipt of the packet at the peer node.² However, Bruckman fails to teach or suggest “determining for each output port from each switch on the network if the following relation is satisfied:

$$\sum_{\substack{i = \text{number of virtual links} \\ \text{passing through the buffer}}} \left[1 + \text{int}\left(\frac{(\text{Jitter In})_i i + \text{maxLatency}}{\text{BAG}_i} \right) \right] * (\text{max frame duration})_i \leq \text{latency},$$

as in Applicants’ amended independent Claim 1.

As acknowledged at page 3 of the outstanding Office Action, “Bruckman does not specifically teach that the value is derived from an equation.” Thus, Bruckman does not disclose an equation for determining whether a network is deterministic, let alone an equation such as the one found in Applicants’ amended independent Claims 1, 7, and 15.

In an attempt to cure the above-noted deficiencies of Bruckman, the outstanding Office Action cites Sugano. The outstanding Office Action at pages 3-4 state that “Sugano

² See the Abstract of Bruckman.

teaches derivation of value as a function of jitter, number of links, and frame duration (pages 6-7).” However, Sugano also fails to teach or suggest “determining for each output port from each switch on the network if the following relation is satisfied:

$$\sum_{\substack{i = \text{number of virtual links} \\ \text{passing through the buffer}}} \left[1 + \text{int}\left(\frac{(\text{Jitter In})_i + \text{maxLatency}}{\text{BAG}_i} \right) \right] * (\text{max frame duration})_i \leq \text{latency},$$

as in independent Claim 1.

In Sugano, the equations fail to include an inequality. In addition, the equations in Sugano fail to include max frame duration as a variable. Thus, Applicants respectfully submit that Sugano fails to teach or suggest at least the above-quoted step. Accordingly, Applicants respectfully request the rejection of Claims 1, 2, 7, 8, 15, and 16 under 35 U.S.C. § 103(a) be withdrawn.

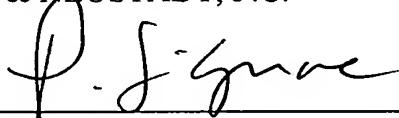
In response to the rejection of Claims 3-6, 9-14, and 17-20 under 35 U.S.C. § 103(a) as unpatentable over Bruckman and Sugano in view of Honcik, Applicants note that these claims are dependent from independent Claims 1, 7, and 15. Accordingly, Applicants respectfully submit that these claims are patentable for at least the reasons discussed above. Further, Applicants respectfully submit that Honcik fails to cure any of the above-noted deficiencies of Bruckman and Sugano. Accordingly, Applicants respectfully request the rejection of Claims 3-6, 9-14, and 17-20 under 35 U.S.C. § 103(a) be withdrawn.

Consequently, in view of the present amendment, and in light of the above discussion, the pending claims as presented herewith are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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